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ORIGINAL DEPARTMENT.

COMMUNICATIONS.

ON SOME POINTS IN THE MECHANICS OF THE HUMAN SKELETON.

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Of Philadelphia.

Read before the Philadelphia County Medical Society, March 27th, 1878.

MR. PRESIDENT AND GENTLEMEN:—Within the narrow limits of an evening's discussion, it is not possible to take up the great subject of the mechanics of the skeleton with any hope of doing it justice. All that I now propose to do is to call attention to a few general considerations and special facts, some of which, at least so far as I know, have not been heretofore noticed.

We have to study, in the bones, their external form or shape, and their interior structure; the purely mechanical functions of the skeleton depending upon these points. For I believe that the office of bone itself is wholly mechanical; as distinct from that of the contained substance as from that of the tissues surrounding it.

This function may be said to be fivefold:—1. To sustain shock; 2. To endure strain (provided for mainly by the arrangement of the cancellous structure); 3. To afford a framework for muscular attachments, by which various functions of the body are performed; 4. To afford a system of levers by which the relations of the body to external objects are maintained or altered; 5. To protect soft organs.

What I have to say will refer mainly to the first, second, and fourth of the functions now mentioned.

1. To stand shock.

It is sometimes said that bone is elastic; and the clavicle is adduced as an example. If the clavicle is placed with one end against a wall, and the other end is smartly struck, the bone will rebound for some distance. But this is due, not to elasticity in the bony substance, but to the shape of the bone itself.

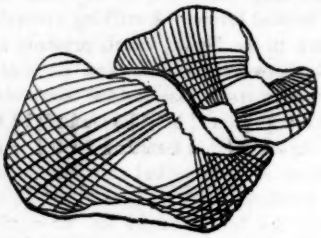
Generally—I believe, indeed, it may be said, universally—the arrangement of bony structures is clearly adapted to such a distribution and deadening of force sustained, as to obviate anything like shock. This is just the opposite to elasticity. Let any one try the experiment of jumping down from some very trifling height, say six inches, with the lower extremities perfectly rigid, alighting flat on the soles of the feet; and see how great the jarring of the whole system will be. As we ordinarily jump, we secure elasticity by the slight bending of the joints, regulated by muscular action.

In the ordinary act of walking, if the bony structure itself were elastic, the step would be irregular and jumping, instead of firm and steady; and this rebound would be greatly exaggerated in running.

There is a beautiful arrangement of the cancellous structure of the bones of the heel, which illustrates the general principle that all stress is sustained by the ends of the columns. In the diagram, drawn from an actual section, I have tried to represent this.

The calcaneum is seen, in vertical antero-posterior section, to show, above and below, a thickening of the bony wall, from which the

cancelli run in such a direction as to form a double set of arches. Those from the upper



wall run downward, the posterior ones terminating in the lower and posterior wall of the bone, the anterior ones running forward, so as to receive the thrust of the weight of the body in walking.

A very similar arrangement is seen in the section of the astragalus. Very little study will be needed to perceive how advantageous this is to the proper discharge of the functions of these bones. The whole weight of the body is received by the calcaneum, on the buttresses of the arch convex upward, and on the crown of the arch convex downward; it is transmitted by an almost exactly similar mechanism through the astragalus.

If now we go a step higher, and examine the lower end of the tibia, we find simply the cancelli abutting, by their ends, against the articular wall of the bone.

The astragalus and calcaneum have to sustain the weight of the body; they have to stand the constant strain of muscular action, and to take the forward thrust of the weight of the body in walking, resisted by the contact with the ground. It will be seen by the diagram how exactly these requirements are met.

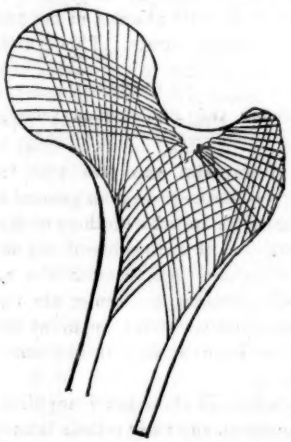
There is another aspect of this arrangement of the cancellous structure. The arches of the calcaneum, which are convex upward, constitute so many bent levers, upon which the muscles concerned in walking or running act to much greater advantage than they would upon the same amount of bony tissue arranged in straight lines, while the resisting power of the structure is vastly increased. Thus we have in this system a combination of the two first-named functions—the sustaining of shock and the bearing of strain.

And in the two bones, the astragalus and the calcaneum, we have a series of four sets of arches, opposed in pairs, so as to give to each bone the greatest possible amount of strength with the requisite bulk, the lower set of arches of the astragalus being placed by their centres against the centres of the upper set of arches of the calcaneum.

Still further, we have to note in each bone the formation, by the crossing of the lines of cancellous tissue, of lozenge-shaped interspaces; this giving the utmost amount of strength in every direction in which force can be applied.

The beautiful arrangement of the antero-posterior and transverse arches constituted by the bones of the foot as a whole, combining firmness with elasticity of tread, and rendering the foot adaptable to irregularities of the surface of the ground, has been often pointed out, and need not be dwelt upon here.

Annexed will be found a diagram, taken from an actual section, of the upper part of a femur, showing an arrangement of the can-



cellous structure, which has been repeatedly pointed out by various observers; and another of a similar section of the upper part of the humerus. What I want to call attention to here, is the marked analogy between the two. But there is something further. I exhibit a section of the humerus and glenoid portion of the scapula; and you will see that while the cancelli of the latter bone run uniformly to the solid wall constituting the floor, if it may be so called, of the glenoid cavity, so as to

give it an even support in every part, the cancelli of the head of the humerus are distributed so as to strengthen certain portions upon which stress will come in the various motions of the arm. It is the same provision as that in the corresponding portion of the femur, but the latter, owing partly to the size and coarseness of the bone, and partly to the simpler conditions to be met, is rather more readily made out.

Perhaps it is scarcely necessary to mention that the principles of construction which have now been discussed are the same as those which modern science has applied to the building of bridges, so that by the judicious distribution of material enormous weights are carried over frameworks which, to an unskilled eye, would seem utterly untrustworthy.

The same arrangement for resisting shock will be found to obtain in the small bones, as in the diagram taken from a section of the first phalanx of the great toe.

2. To endure strain. This function has already been alluded to in speaking of the astragalus and calcaneum, where the provisions against shock and strain are scarcely separable. In the case of the long bones it must be observed that the muscles connected with them act in lines, which may be said, in general terms, to be very closely parallel with those of the cancellous structure, so that, in spite of the small size of the bones as compared with the bulk of the muscular masses, the former are not subjected to undue strain. Some apparent exceptions to this rule exist, notably in the case of the clavicles and the ribs. But, in the first place, these bones are abundantly supplied with cancellous columns crossing their interior; and, in the second place, they are suspended, as it were, between two counterbalancing forces, so that there is really no chance of their giving way. Thus, in the case of the clavicle, the attachment of the trapezius and deltoid correspond accurately; and each rib is equally pulled upward and downward by the muscles above and below it. A very slender stick will sustain a considerable weight applied accurately in the line of its axis, or suspended so that the bearing takes place along its whole extent, while it would yield at once to a far slighter force applied in such a way as to bend it.

In connection with the two functions already considered with reference to the cancellous structure, and with the fourth, the affording of leverage, a few words may be said as to the shape of the bones.

The long bones are, for the most part, bent and twisted levers. A striking example of this is seen in the femur, which presents a marked angle between its neck and its shaft, and a curve of more or less decided character in each of those portions. It may readily be seen that the object of this bending is the increase of freedom of motion; but also that in thus gaining freedom there is a sacrifice of strength. Hence the bent portions are strengthened, as are also the curved, by a thickening of the bony wall along the entering angles of the former, as well as along the concavities of the latter.

So, also, in the very marked instance of a bent lever afforded by the lower jaw, where the anterior edge of the ramus, running up from the body of the bone to the coronoid process, is reinforced by a very firm thickening of the compact substance of the wall.

The twisting of the levers constituted by the long bones is, it need hardly be said, wholly for the purpose of changing the direction of the actions to be performed; so that we walk forward; we have the most important functions of the hands in front of us; etc. All sidewise or backward motions are more awkward and difficult than the forward ones. This twisting is, to a certain extent, a strengthening of the bones, or at least, does not weaken them.

Let me now speak of some further points in connection with the lower jaw. This bone consists, on either side, of a lever of the second order, the power being between the fulcrum and the weight. On looking at the origin of the temporal muscle, which is the main agent in closing the jaws (aided, of course, materially, by the masseter and pterygoids), it seems as if the posterior fibres, arising so far back, and running forward, would act at a great disadvantage. But we find that they turn downward over the root of the zygomatic process, which constitutes a pulley, and gives them a power of upward traction, at least as great as if they ran straight from their origin to their insertion.

In very young and very old persons, before the teeth have come and after they have dropped out, the shape of the jaw is, of course, different, partly from the mere absence of the teeth, partly from formative or degenerative changes in the bone. In adult life the angle between the rami and the body of the bone

approaches nearest to a right angle, and the power of mastication is greatest, as there is more solid food required and taken.

One may perhaps note here the very great amount of power provided for shutting the mouth, as compared with that for opening it. And yet a cynic might say that the former is comparatively very little exercised by most people.

Passing now to the scapula, I would point out the arrangement of the prismatic rib (Ward)* at the outer end of which the glenoid cavity is situated, and the deep hollow in which the subscapularis muscle lies, enabling this to balance perfectly the supra- and infraspinati, and to contract without interfering with the subjacent serratus magnus.

A matter to which I would here call attention has not, so far as I know, been referred to by any writer. It is the gathering up of muscular action from a wide region, and concentrating it on a certain point. For instance, the trapezius, latissimus dorsi, pectoralis major and minor, and all the scapular muscles, may be made auxiliary to the biceps and brachialis anticus, so as to lend their whole force to the action of flexing the forearm upon the arm. And when to this force is added the muscular power of the lower extremity, exerted in pushing against a point of resistance, it will easily be seen what an accumulation of energy there is for the accomplishment of the act of pulling. Generally speaking, the origin of a muscle is wider than its insertion; force is gathered up and concentrated.

At the first glance it would seem as if the arrangement for the flexion of the forearm on the arm was very imperfect. The fulcrum being at the elbow-joint and the power very close to it, the leverage is apparently greatly against the action of the biceps and brachialis. But when the supplementary agency of the flexors and pronators of the forearm and hand is taken into the account, the resulting power and range of flexion is seen to be ample.

In conclusion, I would offer a suggestion in regard to the mechanics of walking.

The witty and learned Prof. O. W. Holmes, of Boston, in his well-known paper, "The Human Wheel, its Spokes and Felloes,"† regards the lower extremity of man as the spoke of a wheel, the hub of which is at the hip-joint, the felloe being represented by the foot. It seems to me that it would be more correct to regard the foot as the hub, the weight of the body resting on the end of the spoke. By an admirable arrangement, combining firmness with elasticity, the spokes are continually shifted, and revolve around a new bearing-point at each successive step. At the same time the pressure on the end of the spoke is perpetually varied, so as to maintain at the same time the perfect equipoise of the body, and enable the shifting to take place without jar or awkwardness. In this arrangement, the obliquity of the neck of the femur affords a very great advantage.

*Outlines of Human Osteology; a most admirable book.

†Published some years since in the *Atlantic Monthly*, and widely distributed by Dr. Palmer, the famous maker of artificial limbs.

INTRA-CAPSULAR FRACTURE OF THE NECK OF THE THIGH BONE.

BY F. H. GROSS, M.D.,

Of Philadelphia.

At a meeting of the Philadelphia County Medical Society, held March 27th, 1878, Dr. F. H. Gross, one of the surgeons to the German Hospital, presented a specimen of intra-capsular fracture of the neck of the thigh bone, and made the following remarks:—

The specimen of intra-capsular fracture of the neck of the left femur, which I have to show to the Society, was removed from the body of an old lady who died fifty-one days after sustaining the injury, in the seventy-eighth year of her age.

The case first came to my notice on the 6th of February, 1878, under the following circumstances, being five weeks after the occurrence of the accident. Her son called on me at the date named, with a view of having the patient admitted into the German Hospital. He gave a brief account of his mother's condition, and stated, that inasmuch as her medical attendant no longer entertained any hope of her recovery, he had sent the doctor a note, informing him that it was the family's intention to apply to a hospital for further aid, and that his services would, therefore, be no longer required.

For the early history of the injury I will here insert a note subsequently received from Dr. J. M. Barton, who informed me that he had seen the case twice, in its early stages, as consultant.

"PHILADELPHIA, February 26th, 1878.

"MY DEAR DOCTOR:—I first saw Mrs. B. on January 4th, 1878 (the day after her accident), in consultation with Dr. Theo. Gruel, of this city. She had caught her foot in some slight obstruction while crossing the yard, and had fallen. We found her in bed, complaining of pain in the left hip, increased by pressure and by the slightest motion of the limb, no shortening, very slight eversion of the foot; there was no ecchymosis, which confirmed the history of quite slight violence having produced the injury. These facts, taken in connection with the absence of evidences of dislocation and the advanced age of the patient, induced us to regard the case as one of intra-capsular fracture. We made no manipulations to confirm our diagnosis, fearing to rupture the slight points of attachment that remained. Temporary dressings and extension were used until the following day, when sand bags and extension by adhesive plaster were applied. On careful measurement we found that about half an inch shortening had occurred since the day previous.

"Yours,

"J. M. BARTON."

At the urgent request of her son I visited the patient, to satisfy myself whether she was in a suitable condition for removal to the hospital. I found her in bed, upon a straw mattress, in a very feeble condition and much emaciated. The lower extremities were œdematous, markedly so from the knees down. The fractured limb, with the toes everted, was shortened about an inch. It was movable at the hip, but the knee and ankle, and all the joints of the opposite limb were quite stiff; indeed, this immobility extended pretty much to all the joints of the body, so that any attempt to raise the patient into a sitting posture was unsuccessful, and caused her much pain. Her friends informed me that extension had been kept up for three weeks, and that after that time all surgical dressings and appliances had been discontinued. She was suffering from continuous incontinence of urine, and occasional involuntary discharge of fæces. These distressing complications, I was told, had set in during the second week after the accident. Under these circumstances the unwholesome condition of the bed and atmosphere of the room can be easily imagined, without further description. She was, as might be expected, badly bedridden. A large bedsore, with its edges deeply undermined by the sloughing process, had at several points penetrated to the sacrum, and some days later a small sequestrum of that bone was exfoliated.

In regard to her physical condition previous to the injury, I was informed that she had always been a well nourished person, and for one of her years, had enjoyed pretty good health, an occasional slight swelling of the feet having been the only thing complained of. The case seemed to present not a single favorable circumstance, and no matter what treatment might be instituted, no very hopeful prognosis could now be made, and in this I quite agreed with the expressed opinion of her former attendant. The friends of the patient, therefore, concluded not to send her to the hospital, but appealed to me for some advice as to how her wretched condition might be ameliorated at home. As their means for providing any comforts for the patient were very limited, I succeeded in prevailing upon the authorities of the hospital with which I am connected, to permit the loan of a reclining chair, which is well suited for the treatment of fractures of the neck of the thigh bone in old persons, and which had recently been used at the hospital with marked success, and great comfort to the patient. This chair can readily be thrown into a triple-inclined plane or straightened out into a couch, and is provided with air cushions throughout, and a bed pan. Professor William H. Pancoast some years ago called the attention of this Society to the admirable qualities of the reclining chair for the treatment of these fractures, especially in aged people, who bear confinement in bed so very badly.

On placing the patient upon the chair it was found that, from the long-continued horizontal position, her body had acquired a degree of stiffness equal to that which we find in rigor mortis, and could not be made at once to adapt itself to the inclined planes. It became necessary, therefore, to keep the chair for a time in the position of a straight couch. In the course of a week, however, her body was brought, by gradual efforts, into a semi-sitting posture, when the patient expressed herself as feeling decidedly more comfortable.

The local treatment of the bedsore now consisted of antiseptic washes and the application of a slightly stimulating ointment, composed of resin cerate and cosmolin. The sphacelated tissues soon became detached, and the ulcer

ceased to spread, and assumed a more healthy appearance. A few punctures with the lancet relieved the œdema of the legs and feet. The general treatment was made up of tonics and stimulants, such as compound tincture of Peruvian bark with phosphoric acid, brandy and a generous diet. Under the use of astringents and nux vomica the evacuation of the bowels became more under the control of the patient, but the incontinence of urine remained unabated and continued to be a serious annoyance. For a time the patient's condition seemed to improve, and some slight hopes of recovery began to be entertained. On the 22d of February, however, a rather sudden change set in; her vital powers rapidly sank, she refused to take either food or medicine, and died on the following day, the seventeenth after my first visit.

Permission to make a post-mortem examination of the injured joint having been obtained, I succeeded in securing the specimen before us, together with the upper portion of the opposite femur.

In examining first the head and neck of the uninjured bone, which I have sawn through longitudinally, and from which the fatty substance has been removed, it will be seen how light and frail this part of the thigh bone may become in advanced age. The meshes in the cancellated structure are very large, and the cancelli correspondingly thin and weak. It will be noticed, too, that the more compact osseous tissue of the cylinder is very thin, and in holding the specimens against the light, their translucency shows the bone to be weakest at a point within the capsular ligament where the fracture occurred.

On examining the fractured specimen, the head of the bone is seen to have descended below its normal height, and rests between the trochanters, the neck having almost entirely disappeared by absorption. The lesser trochanter, under such circumstances, prevents the further descent of the head, or I should rather say, that this bony process obstructs the further ascent of the trochanteric fragment. There has been no attempt at union of any kind, and the fragments are merely held together here and there by strips of periosteum and of the reflected capsule. On looking at the posterior side of the specimen, and lifting the head from its position, the line of fracture appears to have taken an oblique direction, starting from below and posteriorly, near the articular surface, and passing obliquely outward and forward, so as to leave the acetabular fragment a little longer in front and above than it is below and behind. But I believe the obliquity, as we now find it in the specimen, is due in some measure to the process of absorption having been more rapid on one side of this fragment than on the other; and this may readily happen from the unequal degree of pressure brought to bear on the two sides. And when we consider the action of the external rotator muscles upon the trochanteric fragment, drawing it backward, and inward toward the medial line of the body, and of the rectus femoris and other muscles that tend to shorten the limb, we can readily understand why the pressure upon the acetabular fragment should be greater below and behind than at the opposite points. Looking at the anterior side of the specimen, we find a narrow ridge of bone loosely attached to the outer fragment; it is small, and is all that remains of the neck on this side. Whether there was originally any comminution, or whether this piece of bone became loosened by absorption, might be speculated upon; but I am inclined to think, from the account we have of the patient's fall, and from the appearance of the specimen, that the fracture was not a comminuted one.

The practical lesson to be gained from this and similar cases, is to recognize the necessity of getting these aged patients out of bed and off their backs at as early a day as possible. Extension and other suitable appliances may be kept up in the horizontal position for several days, and in some cases with safety for weeks; but if a reclining chair, such as has been described, or something similar to it, can be obtained, it should be brought into use early enough to obviate the evil effects of confinement to bed, which, in many old people, are the main causes that operate against recovery.

Let me add a brief report of the other case alluded to above, which I have condensed from the clinical history furnished me by Dr. A. H. Mellersh, one of the resident physicians at the German Hospital. The case was not treated by me, but occurred during the terms of service of my colleagues, Drs. Franklin and Collins:—

Mrs. S. S., aged 83 years, widow, very stout, general health good, admitted July 9th, 1877 (being three days after her accident). While engaged in her household work, stumbled and fell upon the left side. She could not rise, and suffered great pain on the slightest motion. At

the hospital there was found to be about 1¼ inch shortening of the left leg, the foot was everted, and crepitus was thought to be discovered on thorough extension. The case was considered to be one of intra-capsular fracture. Extension was applied, after which the patient expressed herself as feeling much more comfortable. Owing to the weight and age of the patient, it was feared the treatment would be interfered with by bedsores, and in spite of the utmost precautions, they did make their appearance over the sacrum. The reclining chair was now provided, and upon its use the progress of the bedsores was at once checked, but they continued to give some trouble, and at times there was a good deal of pain over the sacrum. The use of the chair was commenced about a month after admission. The patient was discharged Dec. 15th, 1877, having remained in the hospital a little over five months. At the time of discharge, she was able to go about with the aid of crutches, and can now walk about her room without the help of crutch or cane. I visited this old lady some days ago, at her room, and was surprised to see how well she could walk about on the even floor, without any assistance. With the aid of both her hands on the banister, she can slowly ascend and descend the stairs.

A PROTEST AGAINST MEDDLESOME MIDWIFERY.

BY B. P. REESE, M.D.,
Of Staunton, Va.

There has been much written, of late, upon obstetrical practice, and particularly the kind of forceps which best meet the various indications. I have no doubt of the advantages some may have over others, but it is my candid opinion, based upon experience and observation, all are used unnecessarily often. There is no truer adage than that "meddlesome midwifery is a dangerous thing," and I think, unless we find something preternatural in a case of labor, we are not justifiable in using artificial means. We live in a fast age, and are not disposed to exercise patience and wait for the developments which nature will accomplish. To one who feels, in waiting upon a tedious case of labor, he has the means to give relief to the suffering patient or liberate himself, the temptation is certainly strong.

I have now been engaged in the practice of medicine about twenty-seven years, and I think I have had at least my average number of cases of labor, and even now feel a little nervous when called to visit a case, particularly if I feel any special interest in it.

After entering into the room of my patient and finding she is in actual labor, my first object is to ascertain what presentation, whether breech or vertex, and before withdrawing my hand I examine the dimensions of the pelvis, to see if there are any deformities—not if it is an $\frac{1}{8}$ this way, or a $\frac{1}{10}$ that way, or $\frac{1}{100}$ another way different from what is recognized as a natural pelvis, but whether there is room for a child to pass. If I find a vertex presentation, and a pretty good-sized pelvis (for I dislike a breech presentation, although I never had much difficulty with them), I feel as if a burden is removed.

I think it well enough to teach all the different positions and their minutiæ, the use of the forceps, the advantages and disadvantages of the different varieties, their proper mode of application, and familiarize the student what to do, and how to do, when it becomes necessary; but before any artificial means are used to facilitate labor, we should be well satisfied of their necessity. It is my experience that we learn much at college about diagnosing positions which we find, when brought into practice at the bedside of our patient, is impracticable. Even experts mistake breech presentations for vertex, then how much more liable are we to mistake in diagnosing between 1st, 2d, and 3d positions of the head. I am fully persuaded, from long experience, it is not so important as we are taught to believe, to discriminate between these different positions, for the safety of the patient, or the successful management of the case.

We are advised to always go to a case of labor fully equipped with all the armamentarium for instrumental delivery, which, to a country physician, would be very inconvenient, and to a town or city doctor unnecessary; for there is hardly a case that could be imagined requiring such urgency that he could not procure from his own office or some member of the profession what he might need, in time. Beside the influence upon the patient, to see a physician coming as he would to amputate a limb, with his frightful instruments, expecting it might become necessary to use them in her case, would not have much tendency to compose and

quiet a nervous female, already in a state of apprehension of the result. We would be almost persuaded, in reading their articles, that every second woman would have to be delivered by the forceps; whereas, there are physicians of long experience who do not own a pair, and have never applied them half a dozen times, yet whose record of success would compare favorably with those who have so much to say in laudation of their success in their use. The teaching upon the danger and complications of labor causes students, after graduating, to enter upon their professional life in a state of apprehension for the result in their first case, when, in fact, they will find their labor cases will be attended with less trouble and better success by non-interference than any other cases they are called to visit. It is well enough for them to be thoroughly drilled in what may become necessary, but let them know these complications are of rare occurrence.

Another objection to the use of instruments when not unmistakably and positively demanded, is the injury done the soft parts. I don't care how skillful an accoucheur may be, there is always danger of wounding these parts, and he may not discover at the time any wounds or injuries, yet cellulitis or peri-uterine cellulitis may arise, and leave his patient a miserable existence, from uterine troubles, from adhesions, engorgement, chronic metritis, or some one of the many kindred ailments.

It is wonderful to witness, after the birth of many children, the apparent deformities of the head caused by passing through the bony structures of the pelvis, moulding itself with perfect adaptation to the narrow channel through which it has to pass, and equally wonderful to see how readily and soon it assumes its natural shape and form, giving no marked evidence of sustained injury, thus clearly demonstrating the power and effort of nature to do what many seem to think can be better done by artificial means.

I have written with no attempt to advance a new theory, nor to bring into practical operation other than what is known by older members of the profession; but my object has been to put on a brake to the down-grade movement of the opinions and theories which seem to be making rapid strides toward substituting *artificial* for *natural* labor. Many of these theories are not from practical demonstrations, but gotten up by minds fertile with imaginary conceptions, to place upon the market their instruments. They are calculated to lead astray beginners in the responsible duties incumbent upon the profession.

DESTRUCTION OF AN EXOSTOSIS IN THE NASAL PASSAGE, BY MEANS OF THE BURR OF THE DENTAL ENGINE.

BY J. SOLIS COHEN, M.D.,

Physician to Jefferson Medical College Hospital, and to the German Hospital of Phila., etc.

Dr. —— consulted me, Jan. 19th, 1878, with reference to an osseous tumor in the right nasal fossa, of several years' standing; ostensibly and to the best of his knowledge the result of a blow received in boyhood, on the superior maxilla, with such force as to detach an incisor tooth. The tumor appeared to be developed from the palatine ridge of the superior maxilla, and to involve the vomer also. It gave the patient considerable annoyance, excited headache, had distorted the nose a little, and was painful to the touch; but it was hardly of sufficient size, considering its protracted development, to demand operative interference at the time. As the patient resided several thousand miles away, and feared that he would be too distant from efficient aid in case a necessity for removal should arise in the near future, I decided to operate upon him, and, at his own request, to use the burr of the dental engine to grind the tumor down, rather than to remove it with the gouge, a recent attempt at which had failed to do more than greatly increase his suffering for several days.

After discussing the subject in all its points with our mutual friend, Dr. W. W. Keen, of Philadelphia, and enlisting the services of Professor E. T. Darby (then of the Pennsylvania College of Dental Surgery) to manipulate the engine and burr, with which I had had no practice, I operated, February 14th, 1878, in the private operating room of Jefferson Medical College Hospital, as follows:—

The affected nostril was securely tamponed posteriorly, a wire being substituted for thread, as less liable to be cut through during the operation. The patient was then etherized and placed in the recumbent posture. The ala of the nostril was held upward and outward by means of a hook improvised from a hair-pin; an incision was made over the surface of the

exostosis, through the mucous membrane and periosteum, which were then peeled off to both sides in mass, by means of a blunt-edged elevator, such as is used to strip the hard palate in uranoplastic operations. The mass, being well exposed, was then gradually ground away by Professor Darby, with the burr of his engine, a gentle stream of water being continuously propelled upon the parts, to keep down the heat of friction, and to wash away the debris, so as to secure a clear field for operation. (The tampon fully protected the pharynx from blood and water.) This being done as effectually as was deemed practicable, I then scraped away, with a sort of hooked graver, some prominences left by the burr, after which Professor Darby carefully polished all the exposed surface of bone with a small corundum wheel. The action of the engine was eminently satisfactory, and all jarring of the parts was avoided by its use.

The operative procedure being over, the tampon was removed, the periosteum and mucous membrane replaced, the nostril occluded anteriorly with a cotton compress that had been steeped in carbolized oil (1 : 40) and the patient put to bed.

The wound did well, insignificant fragments only of the injured mucous membrane sloughing, and filling up by granulation in a few days.

My thanks are due to Dr. Keen and Professor Darby, for their admirable suggestions and assistance in this novel operation.

Without the engine it would have been impracticable to have gained access for the thorough removal or destruction of this tumor, with the usual surgical appliances, without having detached the nostril of the affected side, or, perhaps, having turned the soft parts of the nose up over the face, as in Rouge's (of Lausanne) operation for disease deep within the nasal fossa.

1431 *Walnut street, Philadelphia.*

Sanitary Protection.

A movement has begun in Scotland, to form a Sanitary Protective Association, under private direction. Its objects are, to insure that each house is properly trapped and drained, and that the water supply is pure. Periodical inspections will be made, in an inexpensive manner, under the direction of a board of professional and practical men, who will have no interest to recommend needless outlay.

Hospital Reports.

PENNSYLVANIA HOSPITAL.

CLINIC OF PROFESSOR DA COSTA,
FEBRUARY 23D, 1878.

Specially Reported by FRANK WOODBURY, M. D.

Non-Tubercular Hemorrhages from the Lungs. Elements of Diagnosis and Prognosis.

GENTLEMEN: The first case to which I will call your attention this morning is that of Bessie H——, single; a sewing woman. Her clinical history is somewhat uncertain. The notes speak of her as having suffered from cough at various periods, but particularly since leaving this hospital last August; for this is not her first admission, but it would appear that she has been here several times. In January last she was received into the ward with an attack of bronchitis, and more or less sore throat. The fact that a febrile disorder existed was proved by the temperature-chart, which registered, on admission, 101°, with a pulse of 120, and respirations forty-six to the minute. She was at once placed upon decided doses of quinia and diaphoretics, and the acute catarrhal condition of the throat and bronchial tubes gradually subsided. It was about this period that, one morning, the nurse, in great amazement, reported the fact, which she could not understand, that the patient, herself, had recorded a temperature of 109° in the axilla, a fact which we accepted with considerable doubt, and, the temperature afterward being carefully watched, it was not observed again. The heat of the surface has since continued very steadily about 99°, with not much variation between morning and evening. You, observe, however, that she is not completely restored to health. Her face is very pallid, and she has had repeated hemorrhages. There is no doubt of this, for it has been seen on several occasions; indeed, it is stated that at one time she spat nearly a pint of blood.

Now, gentlemen, here is a case where a cough, preceded by what we shall call, for convenience, an acute chest trouble, has been followed by repeated hemorrhages. You will say that, before trying to decide on the cause of these hemorrhages, we should make a careful examination of the chest, to determine the present condition of the lungs and heart. Before doing so, it is only necessary to add to our previous account, that this patient, from other considerations, has been decided to have very strongly developed the hysterical diathesis; and that her menstruation is generally imperfectly performed; it is not arrested, but irregular.

Now, in making an examination of the chest, I find clearness on percussion on the left side, but it is slightly impaired on the right; this is in front; posteriorly it is much the same. Upon auscultation, I find some prolongation of the expiratory murmur on the right side, anteriorly, and the same posteriorly, at the apex, but without râles anywhere. Whereas, on the left side the respiration is distinct and normal in character. This corresponds, I find, with the previous observations contained in the notes; in truth, in one of the notes it is mentioned that we heard also a few râles at this part of the lung. Therefore, the only signs of disease are proved to be confined to the upper part of the right lung, by repeated examinations; and it is but fair to state that these have been noticed to be present from the first time we saw the patient.

The case is of interest for diagnosis, and, indirectly, in the prognosis.

Before discussing the questions that come up for solution, however, we ought to supplement this record with the statement of the early history of the case, if this is procurable. She tells us that she had an attack of pneumonia one year ago, and has had a moderate amount of cough ever since; but on questioning her closely, I find that she had some cough even prior to the attack which she calls pneumonia, and had even lost flesh to a marked extent before it occurred.

Now, in the diagnosis and treatment of this case, it is extremely important for us to decide whether or not she has consumption. She has had a cough for a year, loss of flesh, with want of resonance and signs of consolidation at the apex of the right lung. Why hesitate? Why not state at once that this is a case of incipient tuberculosis? The hemorrhages, also, confirm this. It would seem as if all these considerations pointed unmistakably to such a view, and yet I have considerable doubt about it—the fact of her being tubercular—even in view of the repeated hemorrhages. I have seen several cases in the last four or five years that have opened my eyes to a variety of hemorrhage that I had not previously understood. It is a kind of pulmonary hemorrhage occurring in hysterical women, in whom slight signs of consolidation coexist with the bleeding from the lung.

I thought my own an isolated experience until a few days ago, in turning over the pages of a French journal, I saw some remarks on this subject, with the notes of several cases appended, in which there were no signs of tubercular disease. This is the point to which I wished to call your attention and to impress upon your memory. I say, then, that my doubt of a tubercular element in the case before us is based on previous experience. The slight amount of consolidation which we discovered will not forbid this view, because we often meet with a small amount of consolidation remaining after an acute lung difficulty, such as she suffered from on her first admission into this hospital. Such consolidation is not tubercular, but of inflammatory origin, and may be absorbed by proper treatment. Again, you will not be likely to find the evidence of tubercle so strictly confined to one side, in such a chronic affection, as it is in this patient. Tubercle generally invades both apices, although perhaps not to an equal degree. Are there no other points that will aid us in our diagnosis? Yes; I turn to the even temperature record, which has been almost normal since the first days after her coming into the hospital. I point to this, and to the fact that there is no expectoration, except at the time of bleeding. I also point to the actions of the woman—not to speak of the little freak of sending the temperature up to 109°, which would go to prove the truth of the view I take of this case. Whether this turns out to be correct or not, it will, at all events, have been instructive to have called your attention to the peculiar form of hemorrhage from the lungs.

You will say, will you long remain in doubt? Must this case remain an unsolved one for any length of time? I think not, but, on the other hand, even if we were unsatisfied with this examination, and were still in doubt whether tubercle existed or not, I will tell you how we may verify our views. For one thing, we may make an accurate physical examination, from time to time, and compare the results. The affected area now extends down to the lower border of the second rib; we have established this point carefully, by both auscultation and percussion. We know the exact amount of disease to-day. We will leave the case for some weeks without special examination, and will then compare the result; if the dullness be found to be passing away under the treatment, we shall know that the consolidation was simply pulmonic and temporary; but if it do not pass away, but we find the breathing getting harsher, and râles appearing further down, or in other parts of the lung structure, we will believe it to be tubercular. Again, if we find variations in the temperature, and especially, decided changes between the morning and evening, we shall incline still more to this view, and shall be certain that the tubercular process is progressing.

You may say that there is one point upon which I have not laid sufficient stress—the frequency of the bleedings from the lung. Her courses have not stopped, but they are irregular, and I have repeatedly seen cases of so-called vicarious menstruation, and have observed some peculiar relation between the obstruction in the courses and pulmonary hemorrhage, in cases like the one before us.

How shall we treat these cases? By chalybeate tonics and blisters to the upper part of the chest. She has been dry-cupped during the acute attack, with great benefit, and since then has been taking twenty drops of the muriate of iron, with quinia, as a tonic. She shall continue this, and, with good food and rest, I think we will find, in the course of a few weeks, a marked improvement, both in her local trouble and in her general condition.

GUY'S HOSPITAL, LONDON.

Reported for the MEDICAL AND SURGICAL REPORTER, by JOHN B. ROBERTS, M. D.

Cystotomy for the Relief of Chronic Cystitis.

UNDER THE CARE OF MR. LUCAS.

The patient, a man of 56 years, and of a healthy appearance, had been troubled with urinary difficulties for about fourteen years. He had, primarily, gonorrhœa and stricture, which were cured by properly directed treatment, consisting essentially of dilatation by bougies. For a long time, however, he had been passing thick urine, which was apparently, at first, due to mucus, but which was now owing to a very large amount of pus, as had been proved by the well-known tests employed for its detection. The specimen showed a deposit of about one-third of the whole bulk of the urine contained in the bottle. It was rather difficult to decide from what locality this pus came. It might have been from sinuses or a dilatation of the urethra situated just behind the old point of stricture; it might be from the prostate gland, or from the bladder, or even from the ureters, or the kidneys themselves. As the stricture had been dilated, and had been kept so for a long time, we may, perhaps, eliminate the first supposition; and the ureters and kidneys could hardly be diseased sufficiently to produce so much pus without there being a greater deterioration of the patient's health; though it must be remembered that, in cases of this kind, there may be, at times, considerable structural disease of the kidneys without œdema or general disturbance of health. The fact that the patient had occasional attacks of severe pain in the perineum, with subsequent increase in the amount of pus discharged in the urine, suggested the probability of the disease being located in the prostate gland, though the gland did not seem to be enlarged. At any rate, the disease was probably located either here or in the mucous membrane of the bladder. The man had employed all manner of remedies, such as buchu and pareira, without receiving any benefit; and had, moreover, washed out his bladder daily, with many solutions, for a period of years. Nothing had been of avail. His condition was very annoying, and he had consented to undergo any operation which might, perchance, be of benefit. The stricture was well dilated, and he passed water without difficulty; in fact, he had, at times, incontinence of urine. So nothing was to be looked for in that direction, and it was therefore decided to perform cystotomy, in order to give free drainage to the bladder, which being unable to empty itself entirely, allowed a certain amount of pus to remain, to keep up an irritating action. The operation was exactly that of lateral lithotomy, for it included incision into the bladder as well as into the urethra. The patient was placed in the lithotomy position, a staff introduced, and an incision about one and a half inches long made on the left side of the perineum, extending from the median line downward and outward. The finger was placed in the wound, to feel the groove, when the knife was inserted and thrust onward, through the prostate and neck of the bladder, as was proved by the sudden gush of urine. The structures divided are, as is readily understood, those concerned in lateral lithotomy. The inner aspect of the bladder was easily felt through this incision, which now allowed all fluids to drain away, and may thus be of service in restoring the natural condition of the vesical mucous membrane. No more was to be done, except to watch the patient lest hemorrhage occur, and await results. It may be readily understood that it is not desirable to have this wound close immediately, for that would defeat the object sought after by the operation.

MEDICAL SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting, held at the hall of the College of Physicians, Philadelphia, March 27th, 1878, Dr. H. H. Smith presiding, a paper was read by Dr. John H. Packard, upon some of the Principles of the Mechanics of the Skeleton.

The Structure of Bone.

In opening the discussion, the chairman observed that the lines in the cancellous structure, so frequently alluded to in the lecturer's remarks, are seen, on transverse section, to be the sides of canals containing vessels and medulla concerned in nutrition, and are not simply lines of osseous matter, strengthening the bony structure. They are produced by an arrangement of cells in the primary cartilaginous substance, and transmit the blood-vessels (Canals of Deutsch).

He observed, secondly, that the lecturer had taken no account of the obliquely twisted arrangement of the fibres of the compact tissue of the bone, which so greatly contributes to its strength.

Thirdly, he was inclined to dispute the fact that the skeleton is merely for mechanical support. The medullary structure has been recently pointed out by Neuman and Bizzozero as one of the sources of blood supply, and as the origin of the red-blood corpuscles; therefore, of great importance in the nutrition of the entire body, being one of the sources of the supply of blood corpuscles to the general circulation.

The Relation of Bone to General Nutrition—Myelogenous Leukæmia.

Dr. William Pepper, in response to a request from the chair to state the recent medical observations upon the function of the medullary structure, said that the pathology of the osseous system was so far from the subject of the paper that he scarcely felt like introducing the topic,

as it would lead to prolonged discussion, but he would briefly answer the question proposed by the president. Special importance has been given, of late, to the medullary structure of bone. From the fact that cases of disease sometimes occur where great impairment of the general health, progressive emaciation, marked anæmia, and evidences of cachexia, are present, where we find nothing, after death, to account for this condition, beyond an alteration in the marrow of the bones, we are forced to the conclusion that this structure must be of great physiological importance, since its alteration by disease will produce such profound systemic disturbance, and even death. But owing to the hardness of the bone, and its obvious mechanical relations, this function was lost sight of, and the medullary structure was believed to be only concerned in the nourishment of the bone itself. Of late, however, a series of clinical observations have been made, which have thrown some light on this question. Cases of leukæmia were observed, which had all the ordinary clinical appearances of the disease, but which exhibited, after death, lesions neither of the spleen nor lymphatics, but, on the other hand, gave evidence of alteration in the marrow of the bones, so that finally a true medullary variety of leukæmia has come to be recognized. Other cases occur, where all the symptoms are present except the increase in the white blood cells, constituting what is known as pseudo-leukæmia, of which there is also a medullary form.

In progressive pernicious anæmia also, or anæmatosis as it has been called, we have another cachexia, when the well-known symptoms of pseudo-leukæmia are present. Here, again, no lesion competent to account for the grave symptoms was discovered, until recent observations established the fact that, in at least a fair proportion of such cases, marked alterations of the medulla of the bones occur. It seems, therefore, that this interesting form of anæmatosis (defective elaboration of the crasis of the blood) is essentially a medullary pseudo-leukæmia, at least, in some instances.

It would seem, also, as if these extremely grave and even fatal affections, thus briefly referred to, were only the most marked of the series of disorders that may be produced by disease of this part of the osseous system. It is quite probable, in many cases of cachexia, or less marked departures from health, where no ordinary lesion can be found, but where the impairment of health is very evident, that the cause may reside in some disturbance of the medulla of the bones.

Function of the Bony Skeleton.

Dr. John H. Packard did not doubt the fact mentioned by the chairman, that the minute blood vessels follow the course of these fibres; this, however, would not invalidate the truth of the observation that their peculiar arrangement had, for its primary object, the strengthening of the bony structure. There are many instances which could be quoted to show that most of the tissues of the body have primary and secondary functions.

In reference to the construction of the solid substance of the bone, he had intended to elucidate this more fully in his paper; but in general terms it might be said that the arrangement of the fibres carries out the same principles of support that he had been considering in the cancellous tissue. This is well shown in a section of the shaft of the femur, which is perhaps the best illustration that could be found in the whole body.

As to the other functions of bone, its relation to nutrition and disease, they were purposely omitted in the paper, which was restricted to purely mechanical relations. That such other offices are performed by the bones is unquestionable, but it should always be borne in mind that the leading function is support, and to enable the body to move about; at the same time it could be readily understood that such nutritive relation might exist, and that it would be an extremely wise provision of nature for this purpose.

Dr. Benjamin Lee inquired whether any connection had been observed to exist between the direction of the fibres in the bone and the lines of fracture? In his opinion, the solution of this question would seem to be very important in deciding whether they are for the purpose of support, or only for the transmission of vessels.

Dr. Packard had purposely omitted reference to fractures, but assured Dr. Lee, in general terms, that the structure of the bone does affect the line of fracture.

In examining the surface of a transverse section of a vertebra, we see these lines running across the bone, and at right angles to each other. This would not be the case, were they intended merely for the support of blood-vessels. It is very important that the purely mechanical support is maintained; and it is well known that whenever there is disease of the vertebral bodies, the neighboring bones sink down. If the healthy vertebra were hollowed out so as to make a tube, he doubted if it would be as strong, and believed that a cube of the cancellous structure would support a considerable pressure. He could not see the meaning of the peculiar arrangement of fibres in this structure, if it were not intended to supplement and strengthen the denser bony substance.

The President remarked that these bony trabeculi or lines, being very delicate, are incapable, in this form, of greatly adding to the strength, while as hollow tubes they would afford considerable resistance, and, in point of fact, would support a heavier pressure in this shape, on the principle that a hollow tube is as strong and lighter than a solid one.

Dr. Guitéras said that the interesting specializations of structure pointed out by the lecturer might be viewed in a different manner. The lecturer has called them provisions of nature to

meet certain demands; but how much more in accord with scientific study it would be to try and find some relation of cause and effect between function and structure. I think this can be done to a certain extent; and no matter how little we gain in that direction, the step is of great importance. I can trace out in the development of the skeleton certain modifications of structure which are clearly dependent upon previous changes of function. Take, for instance, these very epiphyses, where a great many of the interesting mechanical arrangements studied by the author of the paper are found. In the lower extremity, the epiphyses of the femur and tibia, at the knee-joint, are the first to appear; the polar epiphyses of the limb appear later, but they are the first to become united with the shaft. This, I believe, is due to a marked change in the functional activity of these joints. The forced flexion of the knee in utero, and the early mode of progression by creeping on the knees, make these the points of greater functional activity; but so soon as the erect posture is assumed the knee is in a state of comparative rest, and the polar epiphyses are made more active, hence more rapid growth and earlier union to the shaft of the latter. In the upper extremity the first epiphyses to appear are those at the shoulder and wrist. If you study how the child uses his arm, you will see the reason of this. The lever is too short and he does not break it into two; he moves the arm mainly from the shoulder; the wrist he brings against the ground in creeping; the elbow is comparatively at rest; hence the late appearance of its epiphyses. Later in life most of the movements of the arm are made from the elbow, thus bringing about the earlier union of the epiphyses to the shaft. In this manner that law is carried out; that always the first epiphysis to appear is the last to unite with the shaft. There is only one exception to this law, and it confirms the theory I am maintaining; it is the fibula. In this bone the first epiphysis to appear is the distal one, and it is also the first to unite with the shaft. If we remember that the upper end of the fibula does not enter into the formation of the knee-joint, and look at the importance of the lower end, we must at once admit that, whether creeping or standing, the seat of greatest functional activity is always the lower end of the bone.

It seems to me that this influence of function upon the development of the skeleton can be found in every bone, but I shall only mention the very striking example of the bodies of the vertebræ. The first of these to ossify are those about the middle of the column, those occupying the central position of the arch formed by the vertebræ in the fœtal ellipse. It is only later in life, when the erect posture is assumed, that the lower vertebræ take the ascendency, and the last lumbar and first sacral become the largest, because they are the seat of greatest functional activity.

It is a well-known fact that the nutritious arteries of the long bones are always directed in a definite way. It is very probable, from some rather hasty observations that I have made, that the nutritious artery of the femur changes its direction with the changes I have described above. In the fœtal femurs I have examined it was directed downward instead of upward, as it is in the adult.

Dr. Packard said that he must take exception to some of the remarks just made, and with others he could not agree at all. In the first place, in reference to the clavicle owing its peculiar shape to the action of muscles. He was unable to see how a bone almost evenly balanced between two strong muscles which counteract each other could be greatly altered in shape, even if the truth of the principle were acknowledged. In the skeleton exhibited, which is of large frame, and was, undoubtedly, of corresponding muscular development, this bone is seen to be unusually straight. But he totally refused such an explanation. The direction of the muscles, as a rule, is in a direct line with the fibres of the bone. The muscular tissue of the serratus magnus muscle is seen to be almost in a line with the ribs, while in the case of the intercostal muscles the bones support the muscles in place, and certainly do not owe their shape to these attachments.

The term provision of nature, which Dr. Guitéras has objected to, can only be avoided by substituting other expressions conveying exactly the same idea. When we notice that a part performing a certain function has a structure which previously fits it for that duty, we can say that it was designed or intended for that function. When we see that under certain circumstances a certain result follows, it is evident that it takes place not as the result of accident, but of law, and the action of that law is what I mean by a provision of nature.

Dislocation of the Inferior Angle of the Scapula.

Dr. Chas. K. Mills, in connection with the action of muscles on bones, inquired of the lecturer what muscles were at fault in a case in which, on lifting the arm directly out from the body to a level with the shoulder, the inferior angle of the scapula rotated backward and toward the median line, making a large hollow under its lower extremity. He had thought that the serratus magnus might have been affected.

Dr. Packard thought that it might be produced by separation of the attachment of the latissimus dorsi, from the angle of the scapula, but it would also seem as if there must be paralysis of some other muscles in that region.

Dr. Henry H. Smith replied that if the trapezius and levator anguli-scapulæ were active, and the latissimus dorsi displaced from the lower end of the scapula, this deformity would be produced.

Dr. Allis thought that in Cruveilhier's anatomy it is declared that the rhomboid muscle has part of its insertion in the serratus magnus, and a separation of this attachment might explain Dr. Mills' case.

A Novel Urinal.

Dr. Packard said that he could mention a practical point that might be valuable to the members of the society, as it had been to him. He had attended a lady suffering with a large abscess, where the use of the bed pan for micturition was impossible, and catheterism annoying, when the patient herself suggested the following expedient. She had a large coarse sponge enclosed in an oiled silk bag, and applied to the parts; it absorbed the urine perfectly, kept the bed dry, and contributed greatly to the comfort of the patient. He had since used the plan in other cases, with much satisfaction.

Fatty Tumor, Resembling Elephantiasis of the Scrotum.

Dr. Woodbury exhibited a large tumor, overlying the pubis and involving the scrotum, the penis being nearly buried in the growth, and the testicles partially atrophied by pressure. Specimen taken from a patient at the German Hospital, who died of pulmonary tuberculosis.

REPORT OF COMMITTEE ON MICROSCOPY.

The Committee on Microscopy report that the tumor presented before this Society by Dr. Frank Woodbury has been examined. After hardening, thin sections were made, stained with carmine, and submitted to microscopic examination; they revealed nothing beyond healthy adipose tissue; in other words, the normal structure of the part from which the tumor was removed, viz., the mons veneris.

CHARLES B. NANCREDE, *Chairman.*

EDITORIAL DEPARTMENT.

PERISCOPE.

The Selection of the Operation for Stone.

Not long since, Mr. Teevan read a paper on this subject, before the Medical Society of London. He stated that the following conditions presented themselves for consideration in determining whether a stone ought to be crushed or cut out:—

1. Sex. Neither operation was barred by sex. Lithotrity was specially indicated in females, for in them the urethra was short, straight, and capacious. 2. Up to puberty crushing was not eligible, excepting for the disposal of a little stone which could be got rid of at one sitting. 3. Size of stone. It was quite impossible to say with mathematical accuracy what was the size of the largest stone which could be crushed with safety. Broadly speaking, all stones under one inch and a quarter could be safely got rid of by lithotrity. 4. Multiple calculi might be regarded, if small, as fragments of a crushed stone. 5. The local and constitutional conditions associated with an oxalate of lime calculus were more favorable for the successful performance of crushing than were those occurring with phosphatic stones. 6. The patient's general health. So long as there was a fair chance of recovery, or even of giving patients a few months of comfort, it would be cruel to refuse to operate. 7. Renal disease was no bar to crushing, for no one had as yet been able to show what was the maximum amount of disease compatible with recovery after operation. 9. The sacculated or contracted bladder precluded crushing. In atony of the bladder crushing could be performed, as the fragments could be got rid of by washing out the organ. 10. An enlarged prostrate did not exclude crushing, provided it did not interfere with the explorations of the lithotrite. 11. Stricture of the urethra was remediable, and did not bar the crushing operation. 12. Idiosyncrasy. A very few patients suffered from rigors and urethral fever every time an instrument was passed. They ought to be cut, unless the stone were so small that it could be removed in a couple of sittings by lithotrity. A patient having a stone within the range of lithotrity, and being the subject of stricture and atony of the bladder, ought to be subjected to lithotrity at one sitting, and have the fragments immediately removed through the incision of external urethrotomy. The same might be said of a patient suffering from an enlarged prostate and stricture, or atony. If a cutting operation were required, which kind of lithotomy was most eligible? In boys lateral lithotomy was specially indicated. In them median lithotomy is not justifiable, because in that operation the prostatic urethra is torn in its floor, and the lad rendered sterile when he grows up. In adult males a cutting operation was required for the removal of large stones. Lateral lithotomy did not afford sufficient room for the removal of such calculi; the rectum was cut through or torn, and there was always the risk of dangerous hemorrhage from the arteries, which were cut in their trunks rather than their terminal branches. Lateral lithotomy sufficed for the removal of calculi up to one inch in diameter, but for larger ones the prerectal operation was the best, as it was equal, in the space it afforded, to two lateral lithotomies put together. It combined the maximum advantage with the minimum disadvantage. For the very old or debilitated, recto-vesical lithotomy was indicated, as in that operation the stone could be removed with the

minimum amount of cutting. Median lithotomy was only eligible for those cases of crushing in which a cutting operation was required for the immediate removal of the fragments.

The Therapeutic Value of Mercury.

In an article on this subject, in the *Practitioner*, Dr. J. C. Thorowgood writes:—

There is abundant evidence of the power of mercury to dissolve and disintegrate recent exudations of low vitality, and by accomplishing this object most damaging structural change in organs may be averted.

To persons whose tissues naturally are poorly nourished and of low vitality, mercury, if given, must be carefully watched as to the effect it produces. A strumous habit does not forbid the employment of mercury, unless the patient be of very weak, ill-nourished constitution.

The curative powers of mercury are best displayed in persons of robust habit, not advanced in years, and who chance to be attacked with an exudative or congestive inflammation, attended with fever, loaded urine and obstinately persistent against ordinary remedies.

Alkalies, as a rule, accord better with all forms of mercury than do acids; and, always before giving a person any form of mercury, heed should be paid to anything said as to idiosyncrasy against the remedy, neglect on this point having led to singular but unfortunate results.

An example of its value is in cases of persistent chronic bronchitis; with inflammatory condition of smaller air tubes, the connective tissue around the blood-vessels increases, while the air-cells themselves atrophy and waste away; or these cells may become filled with swollen pigmented epithelium, as in brown induration of the lung. Either condition is one by which the lung function is most seriously and irreparably damaged; hence the great importance of seeking to prevent the continuance of a troublesome bronchitis, and procuring the speedy absorption of whatever kind of exudation may have already taken place from the congested vessels. It is for the promotion of this end that I claim for the preparations of mercury a place that cannot be supplied by any other medicine.

A review of the cases recorded leads me to select as likely to be benefited by a course of pil. hydrargyri those where there appear as prominent symptoms a severe cough, coming on especially at night, feverish tendency, with loaded urine, shortness of breath, some lividity of lips, and perhaps some impairment of resonance at the bases of the lungs, indicative of congestion; expectoration usually scanty and difficult to raise. The patients are rarely advanced in life, and I find that in the chronic bronchitis of old persons, with atrophous emphysema of the lungs and wasted, thin-walled air-cells, mercury is prejudicial rather than good. The time for its employment has passed.

In cases of bronchitis complicated with a true tubercular softening of the lung, and much purulent expectoration, or in any case complicated with persistent albuminuria, mercurial remedies are more likely to do harm than good.

In catarrhal bronchitis tending to pneumonia, with blocking up of air-cells and consolidation of lung, I believe we may employ mercury without fear. Not long since I attended the two children of a professional friend, both of whom had rather severe bronchitis, and in the elder the temperature ran to 105° while dullness at the bases, chiefly right, with crepitation and bronchial breathing, made us believe a pneumonia had developed. Frictions with oleate of mercury very speedily dispersed this dullness, and the child recovered with much more rapidity than I had predicted or expected.

Irreducible Hernia Rendered Reducible by Rest and Diet.

The following case, under the care of Mr. Maunder, is given in the *Lancet*:—

J. H——, aged thirty-five, a tram-car conductor, was admitted on May 18th, 1877, with a scrotal hernia on the right side. There was impulse on coughing. Five years ago he ruptured himself in applying the brake of a car. The hernia was reduced, and a truss was worn. The bowel came down once between that occasion and this, but was properly reduced.

Immediately after admission the patient was placed under the influence of an anæsthetic, and taxis was employed in vain. When Mr. Maunder saw the case he advised rest in bed, with the thighs flexed and comfortably supported on a pillow; a crutch pad to support the scrotum with its contents, in order to favor the return of blood by the omental veins; and the application of an ice-bag. The *rationale* of the treatment was explained to the patient. He was enjoined to eat and drink as little as he could possibly do with, so as to reduce himself, and promote absorption of the fat of the body generally, but especially that contained in the protruded omentum. A saline aperient was also given often.

In about ten days the tumor began to diminish in size, and was pushed up higher into the canal by a repetition of taxis, the intestine being now reduced. On June 12th the patient was again submitted to taxis, with partial success. He was getting tired of bed and of the treatment, but was encouraged to submit a little longer. On July 10th reduction was again tried, with success, and a truss was ordered.

In some remarks on this case, Mr. Maunder laid stress on the importance of trying all reasonable means to reduce a hernia, and said that he had learned this particular plan from a former surgeon of Guy's Hospital. He had lately had an equally successful case in private practice, but at the expenditure of much less time. Unfortunately the process was often a slow one, and patients frequently tired of the restriction placed on their diet.

Ergot in Hæmatemesis.

Dr. Arthur G. Hobbs, of Arthur, Ind., reports to the *Medical Brief* his treatment of three cases of hæmatemesis with ergot. He says:—

In two of the cases referred to, the hæmatemesis was distinctly referable to malarial toxæmia; the cause of the other was not so plain. However, this case, which was in a male, had not become so chronic.

Fluid extract of ergot, in drachm doses, every hour, till three drachms were given, relieved the vomiting. It occurred but once. The same treatment repeated checked all symptoms.

In the other two cases, both males, this treatment relieved the attack; but they continued to recur at brief intervals, always temporarily relieved by the ergot.

Fortunately both cases were under my care at the same time. I determined to try a favorite prescription of Dr. B. H. Hobbs (my father) for malarial toxæmia, which is as follows:—

℞ Quiniæ sul.,
Cinchon. sul.,
Ferri redacti, āā ʒss
Ex. nuc. vom., gr.xij
Acid. arsen., gr.iss
Ex. hyosc., gr.xv.
Ft. pil., No. xxx.
Sig.—One night and morning.

I gave this tonic and alterative together, with one co. cath. pill imp., every alternate night, and am happy to say that neither of my patients have had a recurrence of the blood vomiting. They were treated during the month of August. As Dr. Rogers requests it, I cheerfully give him my mite of successful experience with hæmatemesis.

Treatment of Wounds of the Hand.

Professor Verneuil, on the occasion of operating on a patient who had been admitted three months before for a crushed hand, repeated to his class an emphatic injunction which he has often delivered before. Whenever, he said, you have to treat any kind of crushed wound of the hand, take it as an absolute rule to excise nothing and to regularize nothing by means of the bistoury. In these cases the surgeon should only seek to prevent and to combat the primary accidents, leaving to Nature the care of saving all she can save. She will preserve more than the surgeon could, and will always diminish the mischief. One can hardly conceive the extent to which lacerated tissues, seemingly condemned on the first day, will resume their vitality and undergo reparation. Let Nature alone, then, and wait. At a later period, after weeks or even months, when cicatrization has taken place, then only can the surgeon interfere and regularize the wound so as to render the use of his limb more easy to the patient. After describing the procedures he would have to take in order to regularize the cicatrized wound in this case, Professor Verneuil observed, that had he been tempted to interfere on the first day, some months since, he should have removed parts which can now be made useful, while the patient has passed through the intervening time favorably, by the aid first of simple and then of antiseptic dressings. He contrasted the progress of this case with that of another in which, before sending the patient to the hospital, his surgeon performed some partial amputations, which were followed by phlegmon of the forearm, arthritis, and suppuration of the carpus, etc. The case demonstrates the immense difference there exists between operations performed on the hand during the acute period of the accident, and operations executed later, during a condition of absolute quietude of the region. Such cases are met with daily, and the practitioner ought to have a very clear opinion and pursue a practice rigorously determined upon, never employing the bistoury in a recent wound of the hand, and never regularizing the wound until two or three months after the accident.

The Occasional Non-Significance of Albuminuria.

A writer in the *Lancet* observes that the presence of albumen in the urine, even in very minute quantities, is usually taken as conclusive evidence of such a condition of systemic derangement as deserves to be regarded as disease. Professor Leube, of Erlangen, considering the fact that a trace of albumen is occasionally present in the urine of patients who present no other evidence of renal disease, examined the urine of a large number of men presumably in good health, soldiers on regular duty, in order to ascertain whether albumen could ever be detected in the urine of those who presented no other morbid symptoms. He examined the morning urine of 119 soldiers, and found a trace of albumen in that of five, in one a distinct quantity, in the others merely a faint, just recognizable, trace. In each case the mid-day urine also contained albumen, and in three the amount was larger than in the morning urine. So far the results are not surprising, since they would seem explicable on the theory that these soldiers were suffering from incipient renal disease, which, as is well known, may be unattended by any indication of deranged health. But it was found that albumen was present in fourteen soldiers out of 119 whose morning urine had been free from albumen. In all these instances the soldiers had undertaken arduous duty, marches or battalion drill, during the forenoon, but no food or drink had been taken during the exercise. No casts or blood were found in the deposit from the urine. The albumen soon disappeared with rest. This fact seems to show that in apparently healthy men exertion may induce slight albuminuria. This opinion was supported by an instance in which the urine of a soldier was for two days free from even a trace of albumen, but on the third, after a fatiguing march, showed obvious quantities of it.

THE

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Issued every Saturday.

D. G. BRINTON, M.D., EDITOR.

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THE EMPLOYMENT OF ALCOHOL IN HEALTH AND IN DISEASE.

Renewed and very serious attention has been of late paid, by the medical men of Great Britain and Ireland, to the subject of the use and abuse of intoxicants. Though the vice of drunkenness is bad enough in this country, it is worse in those islands. The annual cost of the alcoholic liquors consumed amounts to the enormous sum of *seven hundred and thirty million dollars;* the number of inmates of workhouses who have been brought there by this indulgence is estimated at five-sevenths of the whole; and of the disease, suffering, immorality and deaths indirectly traceable to the same cause only approximate, yet most startling, estimates have been made.

The President of the Ulster County Medical Society, Ireland, in contemplating this enormous expenditure, exclaims:—

"This sum is enough, in little over five years, to pay off the national debt; enough, if spent in supplying food, clothing, domestic requirements, and otherwise beneficially, to develop good trade, the physical, mental and moral well-being of the people, national greatness and general prosperity—an average of £23 a year for each family! of nearly £5 for each man, woman and child! And what do the people get in exchange for all this expenditure? Misery, misfortune, disease, crime!"

After a very full discussion, the Society of which he is President declared their opinion that alcoholic stimulants are not only unnecessary in health, but are generally hurtful, and therefore, should be discountenanced by medical men.

That apostle of total abstinence, Dr. B. W. RICHARDSON, of London, has been urging the same general facts, by a series of scientific demonstrations and lectures. He does not, however, condemn its use in disease, though he assigns it no prominent place in the materia medica. It does reduce the animal temperature in fever, but the after effects are often most un-

pleasant and dangerous. The skillful exhibition of alcohol in certain cases of nervous disease is productive of benefit. It is alleged to be a useful antiseptic, and it has been said to be a conservative remedy, partially doing away with the need of food.

He maintains, however, that we must accept the evidence of the value of alcohol in regard to its sustaining power *sub judice*, and when we come to practical concerns, where there can be no doubt whatever, we must be even more reserved. In the treatment of starvation in cases of stricture of the œsophagus, the very types of cases of the kind under consideration, no more injurious practice can be applied than the administration of alcohol by any means. In such instances alcohol excites the heart, produces febrile disturbance, interferes with the natural secretions, increases cough, and encourages waste. By the side of milk it has no place whatever, neither does it offer a single indication of its value as a food.

In studying the relation of alcohol to disease, no other arguments can, in the opinion of Dr. RICHARDSON, be scientifically offered in support of its use and service, beyond those to which he has drawn attention. Excepting in the cases named, in which alcohol may be supposed to play a useful part, but in which it cannot be placed as standing alone and as an absolute necessity, he would maintain that total abstinence is as sound a practice in disease as it is in health. Certainly no facts, no series of facts, are more remarkable than those which are revealed when the treatment of disease is observed without the use of alcohol as a remedy. It soon comes to be a rule with all observers in this school of thought, that the less they trust to alcohol the less they see reason to believe in it; that even in its position as a medicine it is of all the more useful remedies the least necessary; and that he who willfully leaves its use to the indiscriminate choice of the sick, or to their ignorant attendants, commits a breach of trust which no professional protection, in this day of awakening knowledge, can for any long time excuse, justify, or guard.

NOTES AND COMMENTS.

Therapeutical Notes.

STRYCHNIA IN WRITER'S PALSY.

Prof. Annandale, of Edinburgh, uses—

℞. Liquor, strychniæ (B. P.)
Aquæ, ää. equal parts.

Six minims to be injected every second day, the dose being increased by one minim till it amounts to twelve minims. Ten to twelve injections are often sufficient.

NITRATE OF SILVER IN NEURALGIA.

A German contemporary gives a short account of some experiments by Le Dentu, on this subject. He has found hypodermic injections of two or three drops of a twenty per cent. solution of nitrate of silver of singular efficacy in the treatment of neuralgia, sciatica, and arthritis.

ACNE ROSACEA.

Mr. Erasmus Wilson advises, in the treatment of acne juventutis, frictions combined with kneading and pressure of the skin, with inunction of the hypochloride of sulphur ointment. This is to be performed at night, and washes off in the morning, with much soap and water. For true acne rosacea, the old treatment by means of hot-water sponging of the face, followed by the use of a lotion of bichloride of mercury, of two grains to the ounce, is occasionally of very great service. Arsenic is much recommended by Wilson, for acne juventutis.

INDIGO IN THE DIARRHŒA OF CHILDREN.

Dr. Dages, of Mexico, has lately recommended indigo in doses of seven or eight grains, in obstinate infantile diarrhœa. This product is generally considered an irritant to the alimentary canal.

ARNICA IN BOILS.

Dr. N. Planat has adopted (*Journal de Thérapeutique*) the use of arnica in all cases of superficial acute inflammation, as boils, angina, erysipelas, etc. He states that arnica cuts short all furuncular eruptions, except those accompanied by diabetes, with remarkable promptness. For external use, he employs a mixture of extract of fresh arnica flowers, ten parts; honey, twenty parts. If this be too liquid, he adds lycopodium. The mixture is applied to the inflamed part and covered with

oiled silk. Equally good results will be obtained in the same cases by the internal administration of tincture of arnica in doses of twenty-five to thirty drops every two hours.

Emphysema as an Aid to Operation.

The *British Medical Journal* states that Dr. Bourel Roncière (*Archives de Méd. Navale*, No. 2, 1878) describes a method of blowing air into the subcutaneous and intermuscular tissue, with the effect of dissociating and isolating the different layers and the superficial tissues, and with the object of facilitating surgical operations. It is employed at the hospital at Buenos Ayres, and is effected thus. In the vicinity of the tumor the skin is perforated with a trocar, and to the cannula is attached an air-pump. The tissues in the neighborhood are compressed, to prevent undue diffusion of the emphysema; and the air is driven by a few strokes of the piston, in quantity sufficient to distend the surrounding cellular tissue and dissociate the various layers. The enucleation of tumors and the discovery of the vessels are said to be much facilitated by the process, which is described as being free from bad results. It has been employed in a large number of important operations: strangulated hernia, removal of cervical and submaxillary and axillary adenomata, ligature of large vessels, etc.

Typhoid and Intermittent Fever in the Lower Animals.

A writer in an English contemporary remarks—

Professor Simonds has pointed out that the infection of typhoid fever may be communicated to healthy pigs by men who have been in contact with diseased ones; for instance, in slaughtering them. And this is a fact of serious import, considering the frequency and fatality of typhoid fever in pigs, and the tendency of butchers in our large cities to sell for human consumption the flesh of the diseased animals. For instance, at Bradford, where an epidemic of fatal typhoid fever in pigs occurred in the beginning of 1876, a pork butcher was committed to prison for two months for having sold some of the diseased flesh of the dead animals. Wallace, in his *Malay Archipelago*, speaks of an illness in a young captive orang "which ran its course like an intermittent fever, and killed it;" the disease "exhibited phenomena altogether human-like." Probably it was intermittent fever; A Natal lion died of fever in the Zoological Gardens, Dublin, in 1864; but in this case, as in so many others, we are not told what was the precise nature of the fever. What is called "low" fever is frequently fatal among donkeys on the east coast of Africa, a fever that may or may not be intermittent or typhus.

The Frequency of Orchitis from Mumps.

M. Laveran, at the Société Med. des Hôpitaux, May 16th, brought forward a paper on "Mumps," in which he said that the affection of the testicle or breast was a very common complication, and should be regarded as a symptom of the disease. Out of 432 cases, no less than 156 had orchitis, and further, he said that out of 111 cases of orchitis, 73 were followed by atrophy. The orchitis comes on about the fifth or sixth day after the parotid is attacked, and often when this begins to diminish. Hence the notion of metastasis. Sometimes the ovary suffers, instead of the breast.

In the United States these complications are certainly not usually so frequent.

Treatment of Glandular Engorgements.

Dr. Quinart, a French surgeon, counsels the application of blisters, not only on enlarged glands, but upon those in which pus has already formed, and he says that, by this method, he has succeeded in obtaining the resolution of inflamed glands which have already contained many ounces of pus. When the perforation of the skin is imminent, he punctures the tumor at its most depending part, and as soon as the pus has been discharged, he covers it with a blister which is extended to a margin beyond its limits. The next day the blistered surface is dressed with mercurial ointment, and a new blister is applied as soon as the first surface begins to dry up.

The Treatment of Subacute Laryngitis.

This form is often called "clergymen's sore throat." On its treatment, Dr. R. H. Semple says, in the *Lancet*—

Although often tedious, it is generally satisfactory, and local measures are far more valuable than constitutional ones. The direct application of alterative solutions to the vocal cords will often be of immediate service in cases which have been previously treated in vain by general medicines, sedatives, and gargles, which

last pass over the epiglottis into the pharynx, and do not touch the seat of the disease. The subacute laryngitis, although often productive of great and protracted suffering, is rarely fatal; but I wish particularly to observe that this remark applies only to idiopathic subacute laryngitis, and not to those numerous cases where the disease is complicated by constitutional or specific morbid influences.

CORRESPONDENCE.

Accidents in Catheterization.

ED. MED. AND SURG. REPORTER:—

In reply to Dr. Beach's article in the REPORTER, entitled "Accidents in the Use of the Catheter," let me state a somewhat similar and unusual experience. Patient about fifty years old, of feeble, scrofulous constitution; had been impotent for about two years. Was called to see him on account of retention of urine. Catheterized him twice a day, for two or three days, then urged him, after giving instructions, to attempt the operation himself.

My diagnosis was enlarged prostate, complicated with spinal anæmia.

He failed to catheterize, and in consequence of his efforts, had a slight oozing of blood from the urethra, which, however, soon ceased. Up to this time I had used a metallic catheter. I then substituted a flexible rubber one, No. 7. It fulfilled the purpose so admirably, that I urged the wife to undertake it, which she did, with success, for the next two days. Then I was suddenly summoned, by a message that my patient was bleeding in an alarming manner from the urethra; found him very much exhausted; had to put him to bed, syncope threatening; had lost fully a pint of pure blood. It was still issuing from the meatus in a steady stream, with the pulsations of arterial bleeding. Could not pass the rubber catheter, but the metallic one passed, and the bladder, not having been emptied for five or six hours, was relieved of about a pint of clear urine, not a stain of blood in it. The bleeding ceased until I got the catheter this side of the neck; then immediately a solid column of blood issued again, from its orifice. Having noticed that the pressure of the instrument, when in the bladder, checked the hemorrhage, and having with me a gelatine bougie (five grains sulph. zinc) I availed myself of its mechanical as well as styptic properties, passed it well into the prostatic urethra, and held it there for a while. The bleeding slowly ceased, and I left it *in situ*, wrapping up it and the penis in some cloths. I left my patient for the night, hoping for the best and fearing the worst. Next morning found everything right; a portion of the bougie had been expelled, but no bleeding had followed; used the catheter without any difficulty, causing no return of bleeding, and bringing away nothing but clear urine. From this time on, about eight weeks ago, the retention gradually ceased, and the catheter was, and is now, dispensed with. My theory of the bleeding is this: An intense passive engorgement of the prostate, producing a hemorrhoidal condition of the superficial veins, one of which rupturing, would be sufficient to produce the amount of hemorrhage which followed. The amount of engorgement, too, would be sufficient to account for the retention, and this opinion is confirmed by the consequent rapid disappearance of that difficulty. No other condition but that of aneurism could account for it, and that would not have been so readily controlled. I suspect, though, in the doctor's case there might have been a malignant condition.

GEORGE ROMIG, M. D.

Allentown, Pa.

Carbolic Acid in Carbuncle.

ED. MED. AND SURG. REPORTER:—

I will give you below notes of a case of some general interest:—

Saw Mr. R. W. on June 3d, 1878, with a carbuncle about five inches in diameter, situated on the anterior part of the thigh, about six inches below Poupart's ligament, presenting the usual appearances. Thinking this a good opportunity to try carbolic acid, I filled a hypodermic syringe with 95 per cent. solution of the acid, attaching a large needle. A puncture was made in the centre of the mass and the needle pushed in to the depth of about three-eighths of an inch, when ten minims were deposited, at three-quarters of an inch another ten minims were left, and ten minims more at one and a quarter inches. For a short time pain was intense, but soon subsided, without opiates. Ordered a large, warm flaxseed poultice. Saw patient again June 6th. Found the central part of the mass broken down, and suppurating very freely. No pain had been experienced since that immediately following the injection of the acid. From this time recovery was very rapid.

G. V. CHAMBERLAIN, M.D.

Birch Run, Michigan.

ED. MED. AND SURG. REPORTER:—

I also have lately been treating a carbuncle. A young student friend called, some two weeks since, with a medium-sized carbuncle, near and posterior to the mastoid process. Said he had one a year ago that lasted and worried him some six weeks. I told him I was afraid he would go through the same worry again. Said he was getting ready for commencement and he couldn't study, and wanted me to try and cure it quick as possible. As yet I thought there was no destruction of cellular tissue, although it was nearly a week old. I charged my hypodermic syringe with five drops of carbolic acid and ten drops of water, and inserting the needle quite into the centre of the carbuncle, I threw in the injection. In three or four hours it was badly

swollen, though not very painful. In twenty-four hours it was much reduced in size, and by the third day had almost entirely disappeared. Final result, abortion or resolution. The dose of acid was probably large, but it was effectual. I got one dollar in cash and ever so much gratitude. I am not writing this for the REPORTER, but only giving you the successful treatment of a carbuncle by one injection.

Wooster, Ohio. L. J. HARLEY, M.D.

Case of Malarial Hæmaturia Successfully Treated on the Mercurial Plan.

ED. MED. AND SURG. REPORTER:—

Having recently treated a case of malarial hæmaturia, with calomel as the principal agent, permit me to report the same, through your valuable journal.

T. H. G. had suffered with periodical attacks of chill and fever for three years; warding them off with quinine. On April 1st he felt as if the fever would return, and resorted to his usual remedy, quinine, too late, however, to interrupt the paroxysm. He soon found a chill of unusual severity approaching, and before it was fairly established voided bloody urine, which continued for twelve hours before I reached him. I found the following symptoms present: pulse 130, skin and eyes yellow, urine copious and bloody, nausea and vomiting, headache, stupor, amounting to unconsciousness, as he would void urine and fæces without notice. I immediately gave him ten grs. calomel, and applied mustard to the epigastrium; gave also small doses of morphine and chlor. pot. Repeated calomel every two hours until 40 grs. were taken, about which time his bowels were moved by the calomel, and immediately on its action the urine began to change, and soon assumed a natural color; gave, then, 5-gr. doses quinine, until full cinchonism was produced. After convalescence I gave, with a view of improving general health, citrate of iron and quinine. He made a rapid recovery.

I have stated this case hoping to hear, through your columns, of any similar treatment, as this is a new disease in this locality, and consequently there is much difference of opinion as regards the treatment. R. C. GRIER, M.D.

Near Port Harreson, S. C.

Tincture of Arnica in Bee Stings.

ED. MED. AND SURG. REPORTER:—

Perhaps it is not generally known that the tinct. of arnica is the remedy par excellence in the treatment of the sting of the honey bee, but nevertheless it is true, as I can attest by personal experience. I have been engaged in bee raising for several years, and, as a natural result, I am stung, not infrequently, especially during the swarming season. Living in the country, and isolated from city conveniences, I have found it convenient, and even necessary, to keep on hand a supply of pharmaceutical and therapeutical preparations, so that my facilities for experimenting have been good, in this line. I think that I have applied almost every medicinal preparation that could reasonably be expected to have any beneficial effect in such cases. But the results were all the same, unsatisfactory, until this spring, when I was stung by a bee, and I applied the tinct. arnica, and the relief was immediate and complete.

Since then I have applied it to many cases, and the effect has been invariably the same; the pain and swelling disappear immediately after applying the tincture. I write this with a hope of benefiting others, as I have been benefited by the discovery. S. B. DIVELBISS, M. D.

West Point, Mo., June 12th, 1878.

NEWS AND MISCELLANY.

Professional Poisoners.

A curious class of poisoners by business is described by a writer in the *Chemist and Druggist*. They are found in India, and use the seeds of various species of *datura*, and are hence called *dhatooreas*. It is in India the custom, when journeying from town to town, to unite with any party going the same way, and apparently of the same caste, to lessen the expenses of traveling and the danger of attacks by wild animals. A single traveler is always allowed, with little inquiry, to join himself to a company. They then smoke together, and cook, and eat their meals in public, by the roadside. The dhatooreas in this way are admitted to the company of any travelers whose caste they disguise themselves to resemble. By worming themselves into the general confidence they may have an opportunity of drugging the flour while fetching it from the store; they may undertake the cooking, or supply their new-found friends with tobacco; or in honor of some pretended family event, they may give the party a feast, at which the chief dishes will be drugged. However, they rarely prosecute their business on so large a scale. More often a single man joins a party of two, which he will poison at the first opportunity. Their victims are generally of the poorer class, and a case is recorded in which a poor old fakeer, or mendicant, and his little son were drugged for the sake of an old blanket, their only possession. The boy died, but the old man recovered after three days' intoxication. It is evident that with such profits on a single transaction they must poison many persons to make a comfortable living. One young man, less than twenty-one years of age, who had adopted the profession because it was "very dull at home in his village," had, in this way, poisoned at least twenty-seven persons in eighteen months. The real number was probably greater.

Children are, or were, frequently enticed by poisonous sweetmeats, and when intoxicated were robbed of their ornaments. In 1868 a number of persons, apparently Brahmins, were

going about Bengal distributing poisoned sweetmeats gratis, with no apparent object or thought of gain. During 1849 fifty-one cases of datura poisoning were treated at the native general hospital, Bombay, and as the number discovered in time for this to be possible is comparatively small, we can, at least, imagine what a large number of cases really occurred.

The Egyptian Medical School.

The Egyptian Medical School at Kasr-el-Aïn was founded in 1827, by Mehemet Ali, closed by Abbas Pasha in 1849, and reopened by Said in 1856. It has since then, under the teaching of Professors Clot Bey, Reyer, Lautner, Bilharz, Griesinger, and others, restored Egyptian medicine to the rank of a science, and replaced the Frankish quacks of the last generation by a native faculty which, probably, has no equal in the East. The Mohammedan prejudice against dissection has here long been overcome, and the latest results of Western pathology having obtained free adoption, this College turns out physicians, surgeons, and apothecaries, many of whom would be a credit to the best European schools. Its curriculum extends over five years, the first two of which are appropriated to further pursuit of the general education previously begun in the lower schools, and the remaining three to exclusively medical studies. A large and well-organized hospital in connection with this school furnishes ample means of clinical instruction to the students, and gratuitous medical treatment to all comers. Attached to it, also, is the School of Midwifery, in which thirty young native women are taught reading, etc., and the elements of medical science and obstetrics; passing through a three-years' course of instruction, they are certificated, and sent into the provinces where the common prejudice of Arabs and Copts forbids male practitioners of the obstetric art.

Mint Culture in New York.

Mr. H. G. Hotchkiss commenced the cultivation of mint in 1841, in the neighborhood of Lyons, Wayne County, New York. He produced at first 1000 to 2000 lbs. annually, and, thanks to his intelligent method of cultivation and the minute care which he employed in the distillation of the plants, the oil of his stamp was soon celebrated as the finest, the purest, and the best in the United States. Mr. H. G. Hotchkiss afterward extended this industry considerably. He has made large new plantations, and a great part of the land which he purchased can be submerged at will during the winter, in order to preserve the plants from the severe cold. Hundreds of laborers spend their care upon the fragrant herbs which cover this large property. One acre of land produces nearly 20 lbs. of mint, and Mr. H. G. Hotchkiss sends yearly more than 50,000 lbs. of this valuable liquid to his different agents, who distribute it through the whole world.

Bee Stinging as a Remedial Measure.

The German papers tell a story of a woman living in the neighborhood of Prague, who suffered so severely from gout in the arm that she could not obtain rest or sleep, and the limb in which the disease had settled was rendered entirely useless. Her husband having heard of a countryman who had been completely cured of rheumatism after being accidentally stung by a bee, persuaded her to try this disagreeable remedy, which, as he pointed out, could hardly prove so painful as the disease. She consented, and allowed three bees to be placed on her arm, and to sting her in several places. Surprising results ensued; the patient soon afterward fell into a long and deep sleep, the first real sleep she had enjoyed for six months, after which the acute pain disappeared, and when the swelling produced by the stings subsided the arm recovered the power of motion, and the gout has not since reappeared.

Counterblast Against Opium Smoking.

A recent edict of the Chinese government speaks of the people as foolish, coveting wealth, and forgetful of the injury that is being done by the cultivation of the poppy instead of cereals, and it enacts that for the future the cultivation of the noxious drug must cease; disobedience thereto to be visited with severe punishment. This edict applies to the whole of China. The district magistrate of Tientsin has personally visited the opium-smoking resorts, and closed them all. Soldiers and officials are strictly prohibited from smoking, under heavy penalties.

Obituary Notes.

—Dr. Robert Lewis Madison, professor and surgeon at the Virginia Military Institute, died at that institution on Sunday night, May 26th. Deceased was a great nephew of President Madison, and physician to Gen. Robert E. Lee.

MARRIAGES.

BOWLER—BRYANT.—In Cincinnati, O., June 6th, at the residence of the bride, by the Rev. A. M. Worcester, Dr. G. W. Bowler and Mrs. H. J. Bryant.

DABNEY—GREGORY.—June 20th, in Grace street Presbyterian Church, Richmond, Va., by Rev. Charles H. Read, D.D., Rev. John W. Dabney and Kate Nelson, daughter of Dr. Thomas L. Gregory, of Hanover county, Va.

HERVEY—GIST.—June 12th, 1878, by Rev. David Hervey, assisted by Rev. A. B. Marshall, at the home of the bride's father, Mr. Henry C. Hervey and Miss Lila J., daughter of Dr. J. W. Gist, all of Brooke county, W. Va.

DEATHS.

BADGER.—On the 26th ultimo, at Souderton, Pa., Dr. Emile B. G. Badger, aged twenty-eight years.

BULLUS.—In New York, Wednesday, June 26th, at the residence of her brothers, No. 335 West Twenty-third street, Hester Sophia, wife of Robert S Bullus, M.D., and daughter of the late Gen. Jacob Morton.